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SUPPLEMENTAL PRELIMINARY
AMENDMENT

Examining Group 1645

Patent Application

Docket No. GJE-65

Serial No. 09/830,807

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner : Jana A. Hines
Art Unit : 1645
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Serial No. : 09/830,807
Filed : April 30, 2001
Conf. No. : 2112
For : Virulence Genes and Proteins, and Their Use

Assistant Commissioner for Patents
Washington, D.C. 20231

SUPPLEMENTAL PRELIMINARY AMENDMENT

Sir:

Applicants respectfully request that the above-identified patent application be amended as follows:

In the Claims

Please substitute the following claims:

Claim 1 (twice amended):

AA!
1. An isolated peptide encoded by an operon, wherein said operon comprises a gene selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtd2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 3 (twice amended):

AA2, 3. An isolated polynucleotide which comprises a gene selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtd2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 4 (twice amended):

4. A host transformed to express a peptide encoded by an operon, wherein said operon comprises a gene selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtd2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 5 (twice amended):

5. A vaccine comprising a peptide, or the means for its expression, wherein said peptide is encoded by an operon, wherein said operon comprises a gene selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtd2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 6 (twice amended):

6. A vaccine comprising a microorganism having a virulence gene mutation, wherein the gene is selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtd2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 9 (twice amended):

9. A method for screening potential drugs, or for the detection of virulence, wherein said method utilizes a peptide encoded by an operon, wherein said operon comprises a gene selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtl2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 10 (twice amended):

10. A method for treatment or prevention of a condition associated with infection by a Gram-negative bacterium, said method comprising administering a vaccine to a person or animal in need thereof, wherein said vaccine comprises a peptide, or a host transformed to express said peptide, wherein said peptide is encoded by an operon comprising a gene selected from the group consisting of *tatA*, *tatB*, *tatD*, *tatC*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtl2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.

Claim 22 (amended):

22. A method for treatment or prevention of a condition associated with infection by a Gram-negative bacterium, said method comprising administering a nucleotide to a person or animal in need thereof, wherein said nucleotide comprises an operon including a gene selected from the group consisting of *tatA*, *tatB*, *tatC*, *tatD*, *tatE*, *mdoG*, *creC*, *recG*, *yggN*, *eck1*, *iroD*, *iroC*, *iroE*, *mtl2*, and *msl* to *msl6*, obtainable from *E. coli* K1, or a homologue thereof in a Gram-negative bacterium, wherein said homologue has at least 30% homology at the amino acid or nucleotide level, or a functional fragment thereof.